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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/602,847	HE ET AL.	
	Examiner	Art Unit	
	JEREMY DUFFIELD	2427	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 March 2009 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-74 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 23 is objected to because of the following informalities: Lines 8 and 13, "in an even that the" need to be changed to --in an event that the--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 7, 8, 45, 47, and 67-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mela (US 2004/0125757) in view of Lee (US 7,295,520).

Regarding claim 1, Mela teaches a computer-readable storage medium encoded with instructions that, when executed, direct a computer to perform a method (Fig. 1, el. A10, A20), the method comprising:

requesting media content at an accelerated bit rate from a source, the accelerated bit rate being a rate that exceeds a normal playback rate, i.e. utilizing the scale and speed headers to increase the data rate and/or the playback rate (Para. 102-103, 115-116, 240-245);

receiving a media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245), and

rendering all content in the media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245).

Mela does not clearly teach an accelerated bit rate that has no intentionally dropped data.

Lee teaches a client transmits a Bit Rate Control Signal to a streaming server and the server is able to increase the transfer bit rate without intentionally dropping data (Col. 4, lines 47-59; Col. 5, lines 59-65; Col. 7, lines 35-45).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mela to include receiving a media stream at the accelerated bit rate, wherein the media stream is an uninterrupted

data stream of the media content that has no intentionally dropped data, using the bit rate increasing method taught by Lee in combination with the system of Mela, for the purpose of providing data more efficiently and with less packet loss to the client.

Regarding claim 7, Mela in view of Lee teaches the source is a streaming media server, i.e. streaming server (Mela-Fig. 1, el. A10).

Regarding claim 8, Mela in view of Lee teaches a computer comprising the computer-readable storage medium, i.e. streaming client (Fig. 1, el. A20).

Regarding claim 45, claim is analyzed with respect to the combination of claims 1 and 8.

Regarding claim 47, claim is analyzed with respect to claim 5.

Regarding claim 67, claim is analyzed with respect to the combination of claims 1 and 7.

Regarding claim 68, Mela in view of Lee teaches the variable speed streaming module is further configured to control variable speed controls of a

media player executing on a client computer (Mela-Fig. 1, el. A10, A20; Para. 102-103, 115-116, 240-245).

Regarding claim 69, claim is analyzed with respect to claim 1. Mela further teaches rendering a stream of media at a real-time playback rate (Para. 229, 240-245).

6. Claims 2-4, 46, 70, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mela in view of Lee in view of Wing So (US 5,987,590) in view of Bhadkamkar (US 5,893,062).

Regarding claim 2, Mela in view of Lee teaches all elements of claim 1.

Mela in view of Lee further teaches the media stream comprises a video stream and an audio stream (Mela-Para. 185, 187), and the rendering further comprising:

processing the video stream and the audio stream at the accelerated bit rate (Mela-Para. 240-245).

Mela in view of Lee does not clearly teach the rendering further comprising:

processing the video stream and the audio stream through a playback filter graph at the accelerated bit rate; and

implementing a pitch adjustment algorithm within the playback filter graph to process the audio stream.

Wing So teaches an MPEG playback filter graph in a computer system (Fig. 10; Col. 13, lines 50-58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mela in view of Lee's renderer to process video stream data through a playback filter graph, as taught by Wing So, at an accelerated bit rate for the purpose of filtering out unwanted data.

Mela in view of Lee in view of Wing So does not clearly teach processing the audio stream through the playback filter graph at the accelerated bit rate; and implementing a pitch adjustment algorithm within the playback filter graph to process the audio stream.

Bhadkamkar teaches processing the audio stream at an accelerated rate (Col. 12, lines 25-55); and implementing a pitch adjustment algorithm to process the audio stream (Fig. 3a, 3b; Col. 12, lines 25-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mela in view of Lee in view of Wing So's renderer to process audio stream data using the pitch adjustment method, as taught by Bhadkamkar, within the playback filter graph, as taught by Wing So, for the purpose of decreasing the pitch during fast-forwarding.

Regarding claim 3, Mela in view of Lee in view of Wing So in view of Bhadkamkar teaches a non-video/non-audio data stream synchronized to the

video stream and the audio stream, i.e. RTSP and SIP session communications and time stamps (Mela-Para. 2-4; 240-246),

the rendering further comprising processing the non-video/non-audio data stream at synchronized locations within the video stream and the audio stream (Mela-Para. 2-4; 240-246).

Regarding claim 4, Mela in view of Lee in view of Wing So in view of Bhadkamkar teaches the non-video/non-audio data stream includes script commands and metadata (Mela-Para. 2-4; 240-246).

Regarding claim 46, claim is analyzed with respect to claim 2.

Regarding claim 70, claim is analyzed with respect to claim 2.

Regarding claim 71, claim is analyzed with respect to claim 3.

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mela in view of Lee and further in view of Porter (US 5,659,539).

Regarding claim 5, Mela in view of Lee teaches all elements of claim 1.

Mela in view of Lee teaches receiving a degraded media stream, wherein the degraded media stream includes a subset of data from the media stream;

and rendering the degraded media stream, i.e. server drops frames (Mela-Para. 240-246).

Mela in view of Lee does not clearly teach receiving a degraded media stream at a reduced rate; and rendering the degraded media stream at the reduced rate.

Porter teaches receiving a degraded media stream at a reduced rate, i.e. receiving a media stream with a lesser fast forwarding rate than the accelerated fast forwarding rate, (Col. 16, lines 40-51), and drops video frames (Col. 17, lines 9-63), wherein the degraded media stream includes a subset of data from the media stream (Col. 17, lines 9-63); and

rendering the degraded media stream at the reduced rate (Col. 21, lines 8-19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mela in view of Lee to include receiving a degraded media stream at a reduced rate; and rendering the degraded media stream at the reduced rate, as taught by Porter, for the purpose of providing the user with any rate of fast-forwarding.

Regarding claim 6, Mela in view of Lee in view of Porter teaches the degraded media stream comprises a video stream that has dropped video frames (Mela-Para. 240-246; Porter-Col. 17, lines 9-63) and wherein an audio stream of the media stream has been dropped (Porter-Col. 20, lines 1-7).

8. Claims 9-13, 16-18, 20-22, 34-36, 39, 48-52, 55-57, and 72-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Belknap (US 6,070,228) and further in view of Mela.

Regarding claim 9, Porter teaches a computer-readable storage medium encoded with instructions that, when executed, direct a computer to perform a method, (Col. 5, line 65-Col. 6, line 34; Col. 16, lines 59-67), the method comprising:

receiving a previously stored, non-live media content via a media stream, i.e. receiving audio-visual data from a mass storage device (Col. 5, lines 35-47; Col. 6, lines 29-34);

determining a source of the media stream (Col. 6, lines 29-34);

a stream server determines if the source can deliver the media stream at an accelerated rate designated by a user, i.e. determining if the server has a prerecorded file at the accelerated rate (Col. 21, lines 8-24), and determining if the media will exceed the available bandwidth (Col. 17, lines 19-63).

Porter does not clearly teach an accelerated bit rate; and enabling and disabling variable play speed controls depending on the source and on whether the source can deliver the media stream at the accelerated rate.

Belknap teaches determining if the source can deliver the media stream at an accelerated rate, i.e. disabling the video object based on the bandwidth of the

channel linking the media server and the media archive and the current amount stored in the media server (Col. 8, lines 18-45).

enabling and disabling variable play speed controls depending on the source and on whether the source can deliver the media stream at the accelerated rate, i.e. disabling the fast-forward button (Col. 8, lines 18-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter's system to enable and disable the variable speed controls, as taught by Belknap, depending on the source and on whether the source can deliver the media stream at an accelerated rate would have constituted the mere arrangement of old elements with each performing the same function it had been known to perform, the combination yielding no more than one would expect from such an arrangement and for the purpose of providing the user with a continuous stream of video without blank screen gaps due to fast-forwarding.

Porter in view of Belknap does not clearly teach an accelerated bit rate.

Mela teaches requesting media content at an accelerated bit rate from a source, the accelerated bit rate being a rate that exceeds a normal playback rate, i.e. utilizing the scale and speed headers to increase the data rate and/or the playback rate (Para. 102-103, 115-116, 240-245);

receiving a media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245), and

rendering all content in the media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Belknap's accelerated presentation rate to include an accelerated bit rate, using the known technique of accelerating the bit rate and presentation rate at the source as taught by Mela, for the purpose of utilizing the well-known and standardized data transfer protocol, RTSP, thereby providing the user with a more efficient trick-play system.

Regarding claim 10, Porter in view of Belknap in view of Mela teaches the enabling and disabling comprises enabling the variable play speed controls such that play speeds cannot exceed a maximum accelerated bit rate at which the source can deliver the media stream without intentionally dropping portions of the media content (Porter-Col. 16, lines 51-60; Col. 17, lines 1-6; Col. 21, lines 9-30; Belknap-Col. 8, lines 18-45), Note: a user can use play speed controls for any of the stored varying frame rate files which do not drop data when transmitted.

Regarding claim 11, Porter in view of Belknap in view of Mela teaches the determining if the source can deliver the media stream at an accelerated bit rate comprises determining an average data delivery rate from the source, i.e.

determining if the media will exceed the available bandwidth (Porter-Col. 17, lines 19-63).

Regarding claim 12, Porter in view of Belknap in view of Mela teaches the enabling and disabling comprises enabling the variable play speed controls if the source is a streaming media server capable of delivering the media stream at the accelerated bit rate (Belknap-Col. 8, lines 18-45), NOTE: Porter teaches any speed of fast forward can be provided by the frame selection process (Porter-Col. 16, lines 51-60; Col. 17, lines 1-6; Col. 21, lines 9-30).

Regarding claim 13, Porter in view of Belknap in view of Mela teaches disabling variable play speed controls in an accelerated playback range if the source is a streaming media server that is not capable of delivering the media stream at the accelerated bit rate, (Porter-Col. 21, lines 8-24; Belknap-Col. 8, lines 18-45); and

enabling variable play speed controls in a decelerated playback range, i.e. slow motion, rewind, play, etc are available (Porter-Col. 20, lines 50-64; Belknap-Col. 8, lines 18-45).

Regarding claim 16, Porter in view of Belknap in view of Mela teaches enabling the variable play speed controls if the source is a local media source,

i.e. mass storage device (Porter-Col. 6, lines 1-11; Fig. 1b, el. 140; Belknap-Fig. 2, el. 130, 140, 220; Col. 8, lines 18-45).

Regarding claim 17, Porter in view of Belknap in view of Mela teaches playing back the media stream at the accelerated bit rate, wherein the playing back includes rendering all content within the media stream, i.e. playing the fast-forward copy of the media file (Porter-Col. 21, lines 8-24).

Regarding claim 18, Porter in view of Belnap in view of Mela teaches the enabling and the disabling comprise altering graphical representations of the variable play speed controls on a graphical user interface, i.e. disabling the fast-forward control button (Belknap-Col. 8, lines 18-45).

Regarding claim 20, Porter in view of Belknap in view of Mela teaches the source is a local media, i.e. for stored media streaming (Belknap-Fig. 2, el. 130, 140, 220) or a streaming media server (Porter-Col. 5, lines 36-67; Belknap-Fig. 2, el. 130, 140, 220).

Regarding claim 21, Porter in view of Belknap in view of Mela teaches the media stream is audio data (Porter-Col. 5, lines 36-47), video data (Porter-Col. 5, lines 36-47), or metadata, i.e. tag file (Porter-Col. 7, lines 25-64).

Regarding claim 22, Porter in view of Belknap in view of Mela teaches a computer comprising the computer-readable storage medium, i.e. a client which is a set-top converter box (Porter-Fig. 1b, el. 160, 170, 180; Col. 5, lines 36-47).

Regarding claim 34, claim is analyzed with respect to the combination of claims 9 and 10. Note: Examiner equates Porter's client (Fig. 1b, el. 160, 170, 180) to a media player.

Regarding claim 35, claim is analyzed with respect to the combination of claims 9 and 10.

Regarding claim 36, Porter in view of Belknap in view of Mela teaches a graphical user interface (GUI) module configured to support a GUI that presents the variable play speed controls to a user and enables the user to activate the variable play speed controls, i.e. user interface with speed control features (Belknap-Fig. 3).

Regarding claim 39, Porter in view of Belknap in view of Mela teaches a computer comprising the media player, i.e. client (Fig. 1, el. 160, 170, 180).

Regarding claim 48, claim is analyzed with respect to the combination of claims 9, 10, and 22.

Regarding claim 49, claim is analyzed with respect to claim 10.

Regarding claim 50, claim is analyzed with respect to claim 11.

Regarding claim 51, claim is analyzed with respect to claim 12.

Regarding claim 52, claim is analyzed with respect to claim 13.

Regarding claim 55, claim is analyzed with respect to claim 16.

Regarding claim 56, claim is analyzed with respect to claim 17.

Regarding claim 57, claim is analyzed with respect to claim 18.

Regarding claim 72, claim is analyzed with respect to the combination of claims 9 and 10.

Regarding claim 73, claim is analyzed with respect to the combination of claims 12 and 13.

9. Claims 14, 15, 53, 54, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Belknap in view of Mela and further in view of Major (US6,990,512).

Regarding claim 14, Porter in view of Belknap in view of Mela teaches all elements of claim 9.

Porter in view of Belknap in view of Mela does not clearly teach disabling the variable play speed controls if the source is a web server delivering the media stream as a progressively downloaded file.

Major teaches disabling the variable play speed controls if the source is delivering live media streams and enabling the variable speed controls if the media stream is stored media streaming (Col. 1, lines 1-55). Major also teaches an internet cache system for use between a media server, i.e. Web server, and the client (Col. 2, lines 1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Belknap in view of Mela's disabling of variable speed controls to include disabling the variable speed controls if the source is a Web server delivering the media stream as a progressively downloaded file, as taught by Major, for the purpose of providing a jitter-free movie with nearly unlimited speeds of fast-forward and rewind.

Regarding claim 15, Porter in view of Belknap in view of Mela in view of Major teaches enabling the variable play speed controls after the media stream is

completely downloaded from the Web server, i.e. variable speed controls are enabled for stored media streaming (Belknap-Fig. 2, el. 130, 140, 220; Col. 8, lines 18-45; Major-Col. 1, lines 1-55).

Regarding claim 53, claim is analyzed with respect to claim 14.

Regarding claim 54, claim is analyzed with respect to claim 15.

Regarding claim 74, claim is analyzed with respect to the combination of claims 14 and 15.

10. Claims 19, 38, 40-42, 44, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Belknap in view of Mela and further in view of Yeo (US 6,711,741).

Regarding claim 19, Porter in view of Belknap in view of Mela teaches all elements of claim 9.

Porter in view of Belknap in view of Mela further teaches the variable play speed controls include:

a play speed control configured to vary a playback rate of the media stream between a rate that is less than a real time rate and a rate that is greater than the real time rate, i.e. any speed of forward and rewind is provided by

holding down the fast-forward/rewind button (Porter-Col. 16, lines 40-51; Col. 24, lines 21-59);

a fast forward control configured to increase the playback rate of the media stream to a rate that exceeds the real time rate (Porter-Col. 16, lines 40-51; Col. 24, lines 21-59);

a rewind control configured to decrease the playback rate of the media stream to a negative rate (Porter-Col. 16, lines 40-51; Col. 24, lines 21-59);

a seek control configured to access a particular playback location within the media stream (Porter-Col. 3, lines 55-59; Col. 11, line 54-Col. 12, line 11);

Porter in view of Belknap in view of Mela does not clearly teach a next frame control configured to step the playback rate of the media stream forward one video frame at a time; and a previous frame control configured to step the playback rate of the media stream backward one video frame at a time.

Yeo teaches a next frame control configured to step the playback rate of the media stream forward one video frame at a time (Col. 5, lines 1-8); and

a previous frame control configured to step the playback rate of the media stream backward one video frame at a time (Col. 5, lines 1-8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Belknap in view of Mela to include a next frame control and a previous frame control, as taught by Yeo, for the purpose of human analysis of each video frame.

Regarding claim 38, claim is analyzed with respect to claim 19.

Regarding claim 40, claim is analyzed with respect to the combination of claims 9 and 19.

Regarding claim 41, claim is analyzed with respect to the combination of claims 9 and 19.

Regarding claim 42, claim is analyzed with respect to claim 36.

Regarding claim 44, claim is analyzed with respect to claim 39.

Regarding claim 58, claim is analyzed with respect to claim 19.

11. Claims 23-29 and 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Major in view of Lang (US 7,272,298) and further in view of Mela.

Regarding claim 23, Porter teaches a computer-readable storage medium encoded with instructions that, when executed, direct a computer to perform a method, (Col. 5, line 65-Col. 6, line 34; Col. 16, lines 59-67), the method comprising:

sending a request to a media source to stream media content from a media file at a non-real-time rate, i.e. client transmits a fast forward request to receive media content from the mass storage device (Col. 5, line 65-Col. 6, line 14; Col. 16, lines 59-67);

a stream server determines if the source can deliver the media stream at an accelerated rate, i.e. determining if the server has a prerecorded file at the accelerated rate (Col. 21, lines 8-24), and determining if the media will exceed the available bandwidth (Col. 17, lines 19-63);

enabling a variable play speed control of a client device (Col. 17, lines 19-63; Col. 21, lines 8-24);

receiving and playing back the media content at the non-real-time rate, i.e. playing a fast-forward version of a media file (Col. 21, lines 8-24).

Porter does not clearly teach a non-real-time bit rate; determining if the media source and a network link can support the non-real-time bit rate without intentionally dropping data from the media content; in an event that the media source and the network link cannot support the non-real-time bit rate, disabling the variable play speed control of the client device; caching the media stream at the client device; and re-enabling the variable play speed controls once the cached media stream can enable the non-real-time bit rate.

Major teaches determining if the media source and a network link can support the non-real-time rate, i.e. whether the media is for a live time session,

which can not be provided at an accelerated rate (Col. 1, lines 33-55; Col. 3, lines 26-50);

in an event that the media source and the network link can support the non-real-time rate,

enabling the variable play speed control of the client device (Col. 1, lines 33-44);

receiving and playing back the media content at the non-real-time rate (Col. 1, lines 33-44);

in an event that the media source and the network link cannot support the non-real-time rate,

disabling the variable play speed control of the client device (Col. 1, lines Col. 1, lines 33-55; Col. 3, lines 26-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter's clients to determining if the media source and a network link can support the non-real-time rate without intentionally dropping data from the media content; in an event that the media source and the network link cannot support the non-real-time rate, disabling the variable play speed control of the client device, as taught by Major, for the purpose of providing a jitter-free movie with nearly unlimited speeds of fast-forward and rewind.

Porter in view of Major does not clearly teach a non-real-time bit rate; caching the media stream at the client device; and re-enabling the variable play

speed controls once the cached media stream can enable the non-real-time bit rate.

Lang teaches in an event that the media source and the network link cannot support the non-real-time rate, disabling the variable play speed control of the client device; caching the media stream at the client device; and re-enabling the variable play speed controls once the cached media stream can enable the non-real-time rate, i.e. fast-forwarding is not available unless data is in the buffer (Col. 3, line 45-Col. 4, line 2; Col. 7, lines 60-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Major to include caching the media stream at the client device; and re-enabling the variable play speed controls once the cached media stream can enable the non-real-time rate, using the VCR-like controlling method taught by Lang in combination with the system of Porter in view of Major, for the purpose of providing the user with a continuous stream of video without blank screen gaps due to fast-forwarding.

Porter in view of Major in view of Lang does not clearly teach a non-real-time bit rate.

Mela teaches requesting media content at an accelerated bit rate from a source, the accelerated bit rate being a rate that exceeds a normal playback rate, i.e. utilizing the scale and speed headers to increase the data rate and/or the playback rate (Para. 102-103, 115-116, 240-245);

receiving a media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245), and

rendering all content in the media stream at the accelerated bit rate (Para. 102-103, 115-116, 240-245).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Major in view of Lang to include an accelerated bit rate, as taught by Mela, for the purpose of using the known technique of accelerating the bit rate and presentation rate at the source utilizing the well-known and standardized data transfer protocol, RTSP, thereby providing the user with a more efficient trick-play system.

Regarding claim 24, Porter in view of Major in view of Lang in view of Mela teaches a non-real-time rate is a rate selected from the group comprising: an accelerated rate (Porter-Col. 7, lines 53-60; Col. 16, lines 40-59; Mela-Para. 102-103, 115-116, 240-245); and a decelerated (Porter-Col. 7, lines 53-60; Col. 16, lines 40-59).

Regarding claim 25, Porter in view of Major in view of Lang in view of Mela teaches the non-real-time rate is the accelerated rate, (Porter-Col. 21, lines 8-24; Mela-Para. 102-103, 115-116, 240-245),

determining that the media source and/or the network link cannot support the accelerated rate without intentionally dropping data from the media content,

i.e. a prerecorded file at the accelerated rate is not available as determined by the stream server (Porter-Col. 21, lines 8-24), and whether the media is for a live time session, which can not be provided at an accelerated rate (Major-Col. 1, lines 33-55; Col. 3, lines 26-50); and

sending a request to the media source to drop data from the media content and to stream remaining media content from the media file, i.e. if requested rate is not available, then frame selection is performed (Porter-Col. 21, lines 8-24).

Regarding claim 26, Porter in view of Major in view of Lang in view of Mela teaches the remaining media content is streamed from the media source within a period of time equal to a period of time that would be needed to stream all the media content from the media source at the accelerated rate, i.e. frame selection is performed on the media file until it can be presented at the requested rate (Porter-Col. 21, lines 8-24).

Regarding claim 27, Porter in view of Major in view of Lang in view of Mela teaches data dropped from the media content is selected from the group comprising: an audio data stream (Porter-Col. 20, lines 1-12); video frames from a video data stream (Porter-Col. 21, lines 8-24).

Regarding claim 28, Porter in view of Major in view of Lang in view of Mela teaches determining that the media source and/or the network link cannot support the accelerated rate without intentionally dropping data from the media content (Porter-Col. 21, lines 8-24; Major-Col. 1, lines 33-55; Col. 3, lines 26-50); and

In response to determining that the media source and/or the network link cannot support the accelerated rate without intentionally dropping data from the media content, sending a request to the media source to stream the media content stream from the media file at a normal real-time rate, i.e. playing the media file (Major-Col. 1, lines 33-55).

Regarding claim 29, Porter in view of Major in view of Lang in view of Mela teaches a computer comprising the computer-readable storage medium, i.e. a client which is a set-top converter box (Porter-Fig. 1b, el. 160, 170, 180; Col. 5, lines 36-47).

Regarding claim 59, claim is analyzed with respect to claim 23.

Regarding claim 60, claim is analyzed with respect to claim 24.

Regarding claim 61, claim is analyzed with respect to claim 25.

Regarding claim 62, claim is analyzed with respect to claim 27.

Regarding claim 63, claim is analyzed with respect to claim 28.

12. Claims 30, 33, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa (US 2003/0093803) in view of Lee.

Regarding claim 30, Ishikawa teaches streaming a media stream to a client at a real time rate (Para. 5);

receiving a request from the client to deliver the media stream at an accelerated rate, i.e. fast-forward (Para. 5, 58); and

delivering the media stream to the client at the accelerated rate, wherein no data is intentionally dropped from the media stream to achieve the accelerated rate (Para. 5, 58-59).

Ishikawa does not clearly teach an accelerated bit rate.

Lee teaches a client transmits a Bit Rate Control Signal to a streaming server and the server is able to increase the transfer bit rate without intentionally dropping data (Col. 4, lines 47-59; Col. 5, lines 59-65; Col. 7, lines 35-45).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishikawa to include delivering and receiving a media stream at an accelerated bit rate, using the bit rate increasing method taught by Lee in combination with the system of Ishikawa, for the purpose of providing data more efficiently and with less packet loss to the client.

Regarding claim 33, Ishikawa in view of Lee teaches a streaming media server comprising the processor-readable medium, i.e. VOD server (Ishikawa- Fig. 1, el. 10; Fig. 3, el. 110, Fig. 4, el. 200; Fig. 5, el. 300).

Regarding claim 64, claim is analyzed with respect to the combination of claims 30 and 33.

13. Claims 31 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa in view of Lee and further in view of Major.

Regarding claim 31, Ishikawa in view of Lee teaches all elements of claim 30.

Ishikawa in view of Lee does not clearly teach determining that a network link cannot support the accelerated bit rate without dropping data from the media stream; and delivering the media stream to the client at a reduced rate that is less than the accelerated bit rate without dropping data from the media stream.

Major teaches determining that a network link cannot support the accelerated rate without dropping data from the media stream (Col. 1, lines 33-55; Col. 3, lines 26-50); and

delivering the media stream to the client at a reduced rate that is less than the accelerated rate without dropping data from the media stream, i.e. playing the video normally (Col. 1, lines 33-55; Col. 3, lines 26-50).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishikawa in view of Lee to include determining that a network link cannot support the accelerated bit rate without dropping data from the media stream; and delivering the media stream to the client at a reduced bit rate that is less than the accelerated rate without dropping data from the media stream, using the speed control enabling/disabling methods taught by Major, for the purpose of providing a continuous stream of media with fast-forwarding capabilities, when available, to the user.

Regarding claim 65, claim is analyzed with respect to claim 31.

14. Claims 32 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa in view of Lee and further in view of Porter.

Regarding claim 32, Ishikawa in view of Lee teaches all elements of claim 30.

Ishikawa in view of Lee does not clearly teach determining that a network link cannot support the accelerated rate; and delivering the media stream to the client at a reduced rate that is less than the accelerated rate; and while delivering the media stream to the client at the reduced rate, dropping data from the media stream.

Porter teaches determining that a network link cannot support the accelerated rate, i.e. determining if the media will exceed the available bandwidth (Col. 17, lines 19-63; Col. 21, lines 9-30); and

delivering the media stream to the client at a reduced rate that is less than the accelerated rate (Col. 16, lines 40-60); and

while delivering the media stream to the client at the reduced rate, dropping data from the media stream (Col. 16, line 65-Col. 17, line 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Ishikawa in view of Lee to include determining that a network link cannot support the accelerated bit rate; and delivering the media stream to the client at a reduced bit rate that is less than the accelerated bit rate; and while delivering the media stream to the client at the reduced bit rate, dropping data from the media stream, as taught by Porter, for the purpose of providing the user with any rate of fast-forwarding.

Regarding claim 66, claim is analyzed with respect to claim 32.

15. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Belknap (US 6,070,228) in view of Mela and further in view of Belknap (US 5,586,264).

Regarding claim 37, Porter in view of Belknap in view of Mela teaches all elements of claim 34.

Porter in view of Belknap in view of Mela does not clearly teach an application programming interface configured to expose the variable play speed controls to programmatic control of a custom application program.

Belknap teaches an application programming interface located in a client receiver (Fig. 7; Col. 18, lines 44-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Belknap in view of Mela's clients to include an application programming interface, as taught by Belknap, configured to expose the variable play speed controls to programmatic control of a custom application program for the purpose of providing an easy-to-use user interface for the subscriber.

16. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Porter in view of Belknap (US 6,070,228) in view of Mela in view of Yeo and further in view of Belknap (US 5,586,264).

Regarding claim 43, Porter in view of Belknap in view of Mela in view of Yeo teaches all elements of claim 40.

Porter in view of Belknap in view of Mela in view of Yeo does not clearly teach an application programming interface configured to expose the variable play speed controls to programmatic control of a custom application program.

Belknap teaches an application programming interface located in a client receiver (Fig. 7; Col. 18, lines 44-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Porter in view of Belknap in view of Mela in view of Yeo's clients to include an application programming interface, as taught by Belknap, configured to expose the variable play speed controls to programmatic control of a custom application program for the purpose of providing an easy-to-use user interface for the subscriber.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY DUFFIELD whose telephone number is (571)270-1643. The examiner can normally be reached on Mon.-Thurs. 8:00 A.M.-5:30 P.M. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Beliveau can be reached on (571) 272-7343. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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04 June 2009
JSD

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